

Table 1.--Lithologic log of core from USNM/AGS Colorado core hole No. 2, Pinedale Creek Basin, Rio Blanco County, Colo.
Core recovered between 800-1,900 feet in depthLocation: SW1/4 NW1/4 NE1/4 sec 14, T. 1 S., R. 99 W. (Rock Creek)
Ground Elevation: 6,597 feet above sea level

Depth interval (feet)	Joint frequency (joints per foot)	Dip of joints		Core loss (percent)	Broken core (percent)	Index number (joint freq. + core loss + broken core)	Joint fillings	Percent of joints with fillings	Description
		dip interval (degrees)	number of joints						
800 - 850	0.4	0 - 30 30 - 60 60 - 90	12 1	5	31	4.0	gilsonite?	46	Siltstone; pale-yellowish-brown to pale-brown; porous; 1/2 to 3-inch beds; <3° dip
850 - 900	0.3	0 - 30 30 - 60 60 - 90	13 2 1	0	26	2.9	gilsonite?	19	850 - 859 Oil shale, light-olive-gray, brownish-gray and dark-yellowish-gray; bedding <3° dip; calcite inclusions 1-3 inches in diameter along bedding planes 859 - 900 Siltstone; color varies from pale-yellowish-brown, pale-brown, brownish-gray to dark-yellowish-brown; friable; porous; bedding ranges from 1/2 inch to >10 inches thick and <3° dip.
900 - 950	0.6	0 - 30 30 - 60 60 - 90	22 7 7	3	42	5.1			900 - 942 Oil shale and marlstone; color varies from pale-yellowish-gray, light-brownish-gray to dusky-yellowish-brown; bedding <3° dip; imperfectly varved; bedding contorted to depth of 930 feet 942 - 950 Siltstone; pale-yellowish-gray to yellowish-gray; thick- to thin-bedded; generally incompetent.
950 - 1,000	0.4	0 - 30 30 - 60 60 - 90	10 6 4	3	38	4.5			950 - 970 Siltstone; short intervals of sandstone, some of which are tuffaceous, pale-yellowish-brown to yellowish-gray; coarse textured; thick- to thin-bedded, <5° dip 970 - 1,000 Marlstone with short intervals of interbedded siltstone, below 988 feet mostly siltstone; pale-yellowish-brown to yellowish-gray
1,000 - 1,050	0.5	0 - 30 30 - 60	19 3	5	52	6.2			Marlstone to oil shale with occasional 1/2 to 6-inch interbeds of tuff; dark-yellowish-brown, brownish-gray, grayish-brown; smooth textured; bedded and imperfectly varved
1,050 - 1,100	0.6	0 - 30 30 - 60 60 - 90	22 2 8	1	17	2.4	calcite pyrite	3 10	1,050 - 1,056 Marlstone to oil shale with occasional 1/2-inch interbeds of white tuff; dark-yellowish-brown, grayish-brown, pale-brown; imperfectly varved; bedding <3° dip 1,056 - 1,100 Siltstone in part tuffaceous; very pale orange, pale-yellowish-brown, pale-brown, occasionally dark-yellowish-brown; porous; bedding <5° dip; fresh pyrite on some fractures
1,100 - 1,150	0.4	0 - 30 30 - 60 60 - 90	10 3 6	0	0	0.4	FeO pyrite	5 50	1,100 - 1,120 Siltstone to fine sandstone; dark-yellowish-brown, bedding <5° dip; 2 nahcolite vugs in this interval 1,120 - 1,124 Marlstone and oil shale 1,124 - 1,128 Tuff; yellowish-gray; wavy bedding, <5° dip; fresh pyrite on fractures; occasional concretions in tuff 1,128 - 1,150 Oil shale; dark-yellowish-brown to dusky-yellowish-brown; generally competent core
1,150 - 1,200	0.5	0 - 30 30 - 60	18 3	0	6	1.1	white powder	4	Oil shale, dusky-yellowish-brown to dark-yellowish-brown, occasional moderate-yellowish-brown; smooth textured; varved; bedding <2° dip; iron stained in broken intervals
1,200 - 1,250	0.5	0 - 30 30 - 60 60 - 90	11 3 8	3	31	3.9	pyrite FeO	5 5	1,200 - 1,250 Oil shale; varved; very sparse nahcolite vugs 1,200 - 1,206 Dusky-yellowish-brown to dark-yellowish-brown 1,206 - 1,234 Pale-yellowish-brown, moderate-yellowish-brown, dark-yellowish-brown; core broken between 1,208 - 1,226 feet 1,234 - 1,250 Dusky-yellowish-brown to dark-yellowish-brown; "discs" between 1,238 - 1,240 feet; iron stained nahcolite vugs in this interval
1,250 - 1,300	0.6	0 - 30 30 - 60 60 - 90	22 1 5	2	18	2.6			1,250 - 1,300 Oil shale; Mahogany marker at 1252; smooth textured; varved; bedding <3° dip; sparse iron staining in broken core 1,250 - 1,260 Pale-yellowish-brown to dark-yellowish-brown 1,260 - 1,300 Dusky-yellowish-brown
1,300 - 1,350	0.5	0 - 30 30 - 60 60 - 90	15 0	7	61	7.3			Oil shale; dusky-yellowish-brown to dark-yellowish-brown; bedding generally <5° dip, locally 25° dip; iron stained slickensides at 1,307 and 1,310 feet; core generally incompetent; pyrite disseminated through core
1,350 - 1,400	0.2	0 - 30 30 - 60 60 - 90	0 3 1	53	75	13.0			Oil shale; dusky-yellowish-brown to dark-yellowish-brown; fresh pyrite disseminated through core; interval is completely incompetent
1,400 - 1,450	0.7	0 - 30 30 - 60 60 - 90	23 5 7	10	52	6.9			1,400 - 1,450 Oil shale; smooth textured; varved; bedding <3° dip; sparse 3-inch diameter iron stained nahcolite vugs; occasional fresh pyrite disseminated through core 1,400 - 1,430 Dusky-yellowish-brown to dark-yellowish-brown with occasional 3 foot pale-yellowish-brown interbeds 1,430 - 1,450 Light-olive-gray, olive-gray, moderate-dark-gray to pale-yellowish-brown
1,450 - 1,500	0.6	0 - 30 30 - 60 60 - 90	23 3 6	0	26	3.2			Oil shale; dark-yellowish-brown, moderate-yellowish-brown, pale-yellowish-brown; smooth textured; varved, bedding <3° dip; sparse iron stained nahcolite vugs; short intervals of "discs"
1,500 - 1,550	1.0	0 - 30 30 - 60 60 - 90	31 3 10	12	38	6.0	gilsonite? FeO	7 2	Oil shale, dark-yellowish-brown to olive-gray; varved; sparse nahcolite vugs; solid core where not broken
1,550 - 1,600	0.9	0 - 30 30 - 60 60 - 90	31 1 13	0	19	2.8	pyrite	9	Oil shale, pale-yellowish-brown to dark-yellowish-brown; varved between 1,550 and 1,580, nonvarved between 1,580 and 1,600; below 1,580 shale has silty texture; slicks at 1,590; sparse nahcolite vugs; core lengths average 1 foot; solid core where not broken
1,600 - 1,650	0.4	0 - 30 30 - 60 60 - 90	9 5 8	0	13	1.7			Oil shale, yellowish-gray to dark-yellowish-brown; silty texture; nonvarved; thin bedded; bedding dips between 0° and 5°, locally 40°; sparse nahcolite; core lengths average 1 foot or less; possible shear or fault zone
1,650 - 1,700	0.2	0 - 30 30 - 60 60 - 90	8 0 1	26	22	5.0			1,650 - 1,693 Oil shale, medium-gray to medium-dark-gray with interbeds of yellowish-gray to light-olive-gray; silty texture; dip of bedding ranges between 5° and 25° 1,693 Start of abundant nahcolite zone; dusky-yellowish-brown, nahcolite vugs as much as 3 inches in diameter; core lengths average between 1.5 to 2.0 feet
1,700 - 1,750	0.3	0 - 30 30 - 60 60 - 90	10 3 3	7	0	1.0	carbonate	31	1,700 - 1,725 Oil shale, dusky-yellowish-brown to dark-yellowish-brown; smooth texture; abundant nahcolite vugs (3 inches diameter); core generally solid; core lengths as much as 2 feet 1,725 - 1,750 Grayish-orange to moderate-yellowish-brown; earthy texture; common nahcolite vugs (1 vug per foot); short intervals of breccia core (<2 feet); core lengths average 1 to 2 feet
1,750 - 1,800	0.9	0 - 30 30 - 60 60 - 90	28 4 4	15	5	2.9	carbonate	86	Oil shale, pale-yellowish-brown; earthy texture; common nahcolite vugs concentrated in zones, often 3-foot intervals with no nahcolite; bluish-white coating on some joints; core ranges from 2-inch "discs" to 4-foot lengths; core loss may be in nahcolite zones
1,800 - 1,850	0.6	0 - 30 30 - 60 60 - 90	17 3 8	10	2	1.8	carbonate	69	1,800 - 1,828 Oil shale, pale-yellowish-brown to dark-yellowish-brown; earthy texture, common nahcolite vugs (1 vug per foot - 3 inches diameter); core tends to break around vugs; bedding <5° dip; core lengths range between 6 inches in vug zones and as much as 7 feet in nonnahcolite intervals 1,828 - 1,850 Pale-yellowish-brown to light-olive-gray; occasional dark-yellowish-brown; bedding dip averages 2°, smooth texture; generally competent; sparse nahcolite vugs; core lengths as much as 4 feet; 1/2 inch white "blebs" in some intervals; core loss may be in nahcolite zones
1,850 - 1,900	0.5	0 - 30 30 - 60 60 - 90	12 2 5	24	6	3.5	white powdery material (less than above)		1,850 - 1,888 Oil shale, pale-yellowish-brown to moderate-yellowish-brown, occasional dark-yellowish-brown; earthy texture; interval of wavy bedding (1,860 - 1,882); tendency to break into "discs" between 1,858 - 1,860; sparse nahcolite vugs 1,888 - 1,894 Silty texture 1,894 - 1,900 Dusky yellowish-brown clayey shale; contains "mud crack"-like partings (<5° dip); some wavy bedding core loss may be in nahcolite zones
1,900 - 1,950	0.9	0 - 30 30 - 60 60 - 90	29 7 5	12	15	3.6			1,900 - 1,916 Oil shale, pale-yellowish-brown with interbeds of silty textured dark-yellowish-brown (1,902 - 1,906); nonhomogeneous texture ranging from clayey to silty; bedding <5° dip; sparse nahcolite vugs; core lengths average 1.5 feet 1,916 - 1,950 Grayish-orange to pale-yellowish-brown, medium dark gray and occasional dark-yellowish-brown; texture varies from clayey to silty; sparse nahcolite vugs; core lengths average 0.5 to 1 foot
1,950 - 2,000	0.3	0 - 30 30 - 60 60 - 90	5 5 2	11	2	1.6	carbonate	17	Oil shale, dark-yellowish-brown, short intervals of dusky-yellowish-brown (1,962 - 1,963) and pale-yellowish-brown (1,983 - 1,991); common nahcolite vugs containing radiating crystals (1,961 - 2,000); 6-inch nahcolite bed at 1,998; nonvarved; core generally competent; core lengths as much as 2 feet
2,000 - 2,050	0.5	0 - 30 30 - 60 60 - 90	14 4 6	4	4	1.3			2,000 - 2,035 Oil shale, dark-yellowish-brown; sparse nahcolite vugs (3 inches diameter) 2,035 - 2,050 Dusky-yellowish-brown and dark-yellowish-brown; abundant nahcolite containing radiating crystals; vugs (as much as 6 inches in diameter) and nahcolite beds? (2,039 - 2,050); nahcolite associated with dusky-yellowish-brown shale; competent core throughout total interval; core lengths as much as 5 feet
2,050 - 2,100	0.4	0 - 30 30 - 60 60 - 90	11 3 6	0	0	0.4	crystals in bluish-gray matrix	5	Oil shale, dark-yellowish-brown, occasionally dusky-yellow-brown (2,060 - 2,064), and moderate orange brown to pale-yellowish-brown (2,088 - 2,090); common nahcolite vugs (6 inches diameter) containing radiating crystals 2,061 - 2,064 Core contains 1/2" x 1" rectangular patches of bluish-gray aphanitic crystal patches, this interval gives off a medicinal odor
2,100 - 2,150	0.3	0 - 30 30 - 60 60 - 90	4 9 1	1	2	0.6			Oil shale, dark-yellowish-brown, interbedded with dusky-yellowish-brown; sparse nahcolite vugs containing radiating crystals (2,100 - 2,118 and 2,126 - 2,128); competent core; core lengths as much as 5 feet
2,150 - 2,200	0.2	0 - 30 30 - 60 60 - 90	8 0 0	0	0	0.2			2,150 - 2,170 Oil shale, dark-yellowish-brown to dusky-yellowish-brown 2,170 - 2,185 Dark-yellowish-brown 2,185 - 2,200 Moderate-yellowish-brown; common nahcolite vugs containing radiating crystals (2,165 - 2,182); beginning at 2,150 core and joints coated with a black soot (burnt shale?); core is very competent; core lengths as much as 5 feet
2,200 - 2,206									Oil shale, pale-yellowish-brown to moderate-yellowish-brown to dark-yellowish-brown
2,214 T.D.									Hole abandoned at 2,214 feet due to gas explosion near bottom of hole. Caliper log indicates caving between 2,100 and 2,214 feet. A black film coming from the bluey pipe covered the water in the mud pit around the 2,150-foot depth. This may have been an indication of shale-oil being retorted by the explosion and subsequent burning of the shale. Black soot on the core was also observed beginning at 2,150 feet